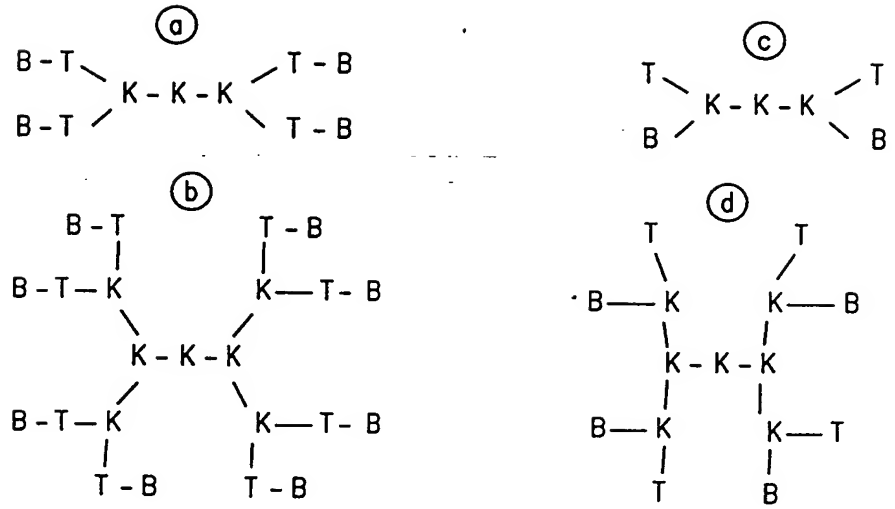



B=carbohydrate, or carbohydrate and tumor peptidicmarker
T=T, $CD_4^+$ epitope
K=lysine

a=B4–T4–M
b=B8–T8–M
c=B2–T2–M
d=B4–T4–M(different organization of T–B epitope)

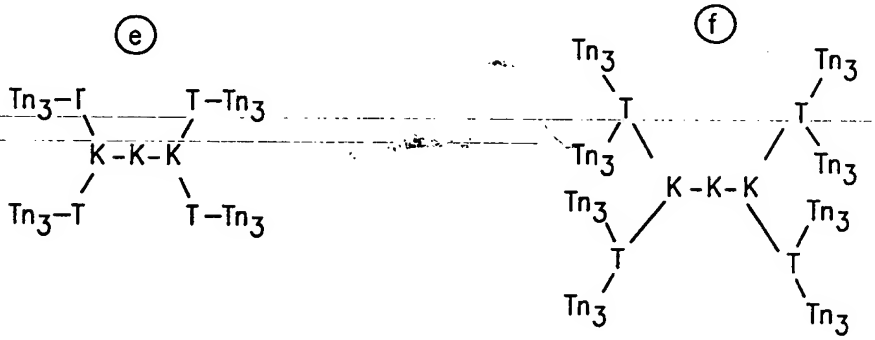
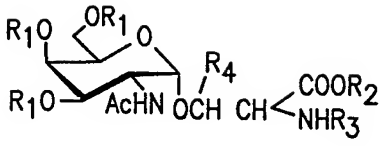
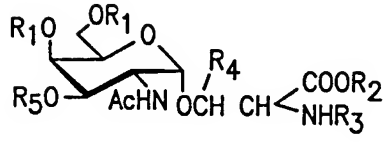



FIG. 1



1:$R_1$=Ac, $R_2$=$t$-Bu, $R_3$=Fmoc, $R_4$=H or $CH_3$
2:$R_1$=$R_2$=H, $R_3$=Fmoc, $R_4$=H or $CH_3$
3:$R_1$=$R_2$=$R_3$=H, $R_4$=H or $CH_3$

FIG. 2a



1:$R_1$=Ac, $R_2$=$t$-Bu, $R_3$=Fmoc, $R_4$=H or $CH_3$
$R_5$=SUGAR MOIETY
2:$R_1$=$R_2$=H, $R_3$=Fmoc, $R_4$=H or $CH_3$
$R_5$=SUGAR MOIETY
3:$R_1$=$R_2$=$R_3$=H, $R_4$=H or $CH_3$
$R_5$=SUGAR MOIETY

FIG. 2b

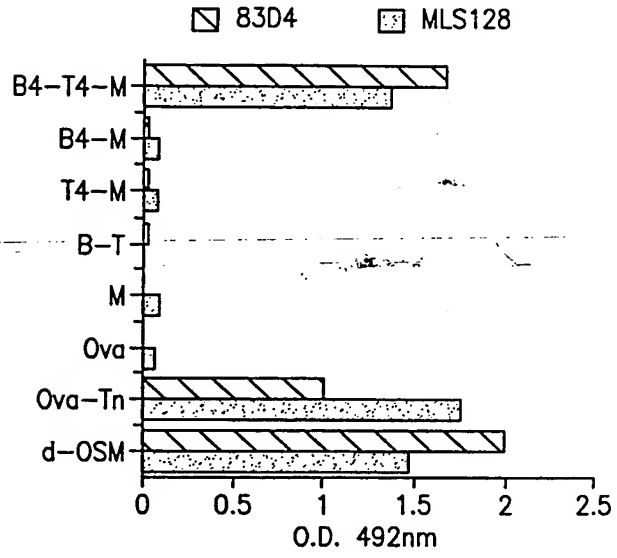



FIG. 3

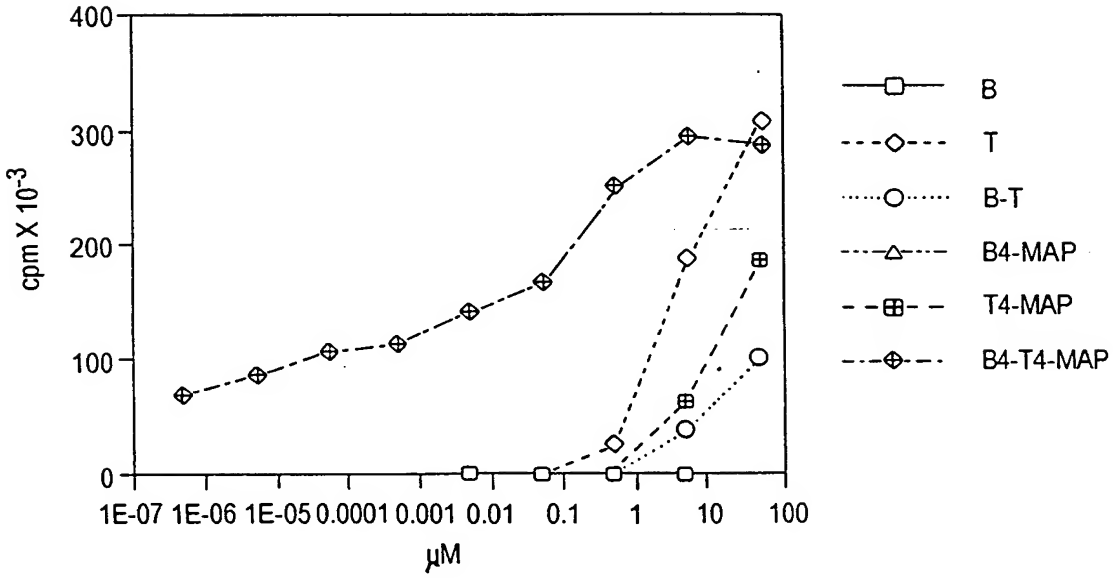

400
300
200
100
0
cpm X 10-3
1E-07 1E-06 1E-05 0.0001 0.001 0.01 0.1 1 10 100
µM
B
T
B-T
B4-MAP
T4-MAP
B4-T4-MAP

FIG. 4a

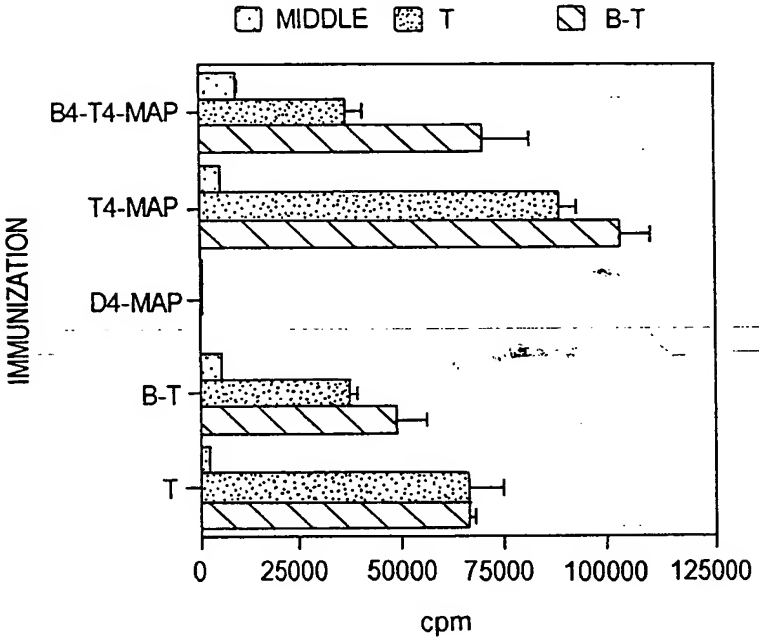

MIDDLE
T
B-T
B4-T4-MAP
T4-MAP
D4-MAP
B-T
T
IMMUNIZATION
0 25000 50000 75000 100000 125000
cpm

FIG. 4b

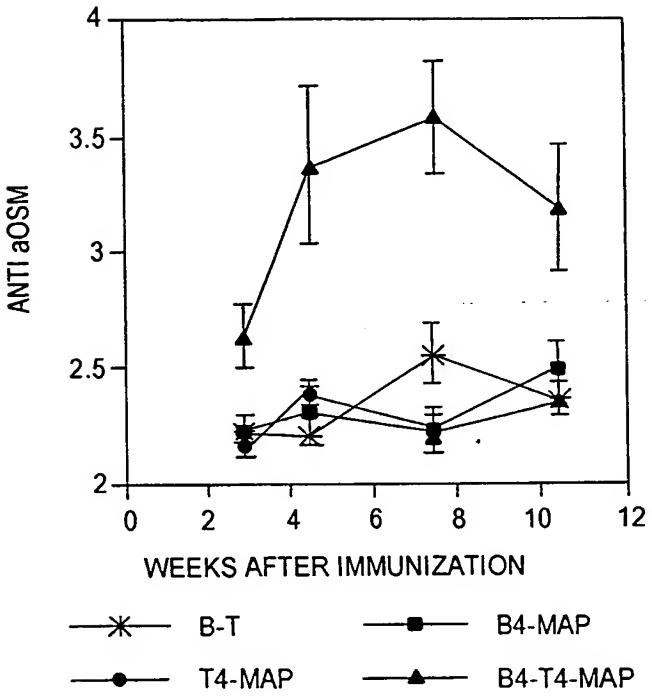

4
3.5
3
2.5
2
ANTI aOSM
0
2
4
6
8
10
12
WEEKS AFTER IMMUNIZATION
B-T
B4-MAP
T4-MAP
B4-T4-MAP

FIG. 5a

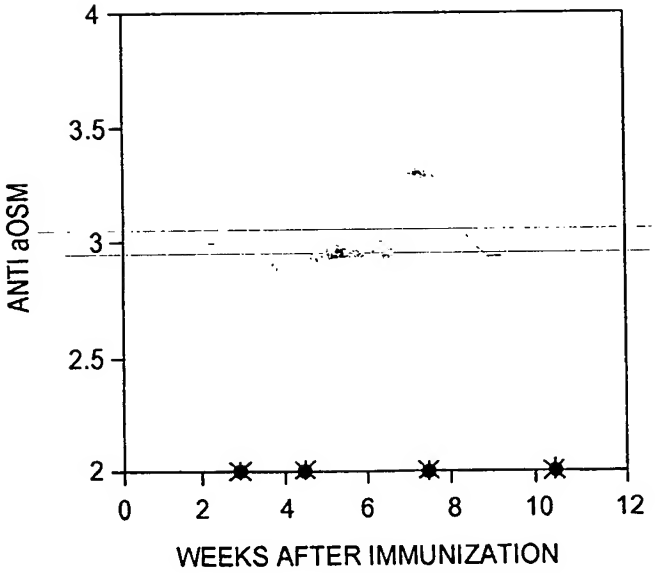

4
3.5
3
2.5
2
ANTI aOSM
0
2
4
6
8
10
12
WEEKS AFTER IMMUNIZATION

FIG. 5b

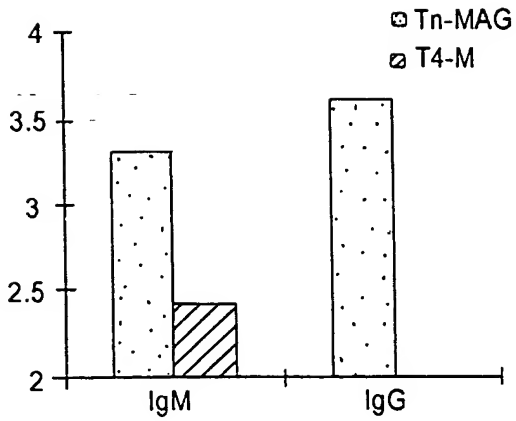



FIG. 5c

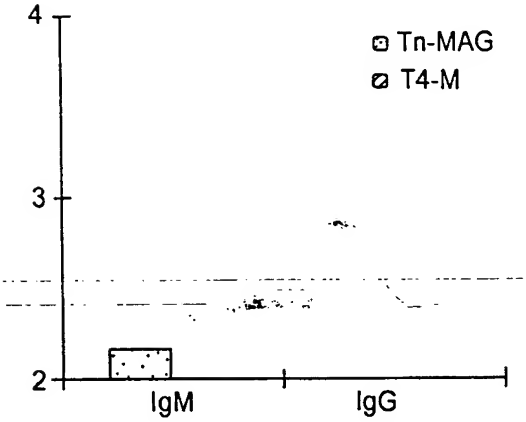



FIG. 5d

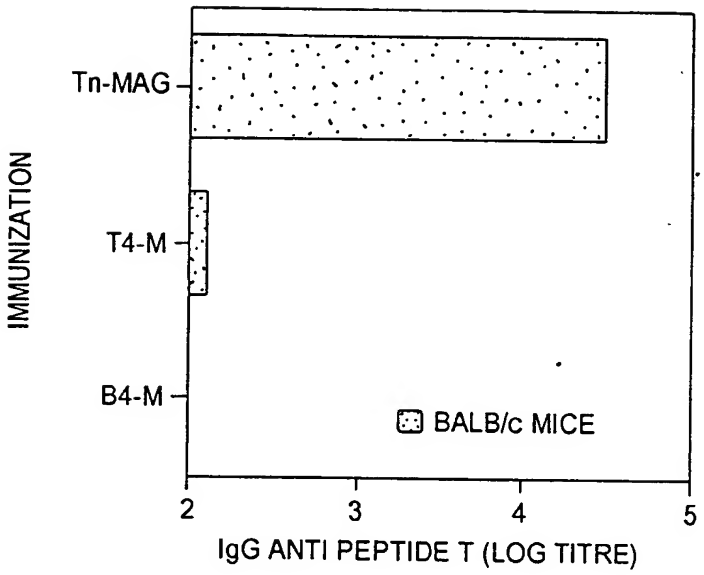

Tn-MAG
T4-M
B4-M
IMMUNIZATION
BALB/c MICE
2
3
4
5
IgG ANTI PEPTIDE T (LOG TITRE)

FIG. 6

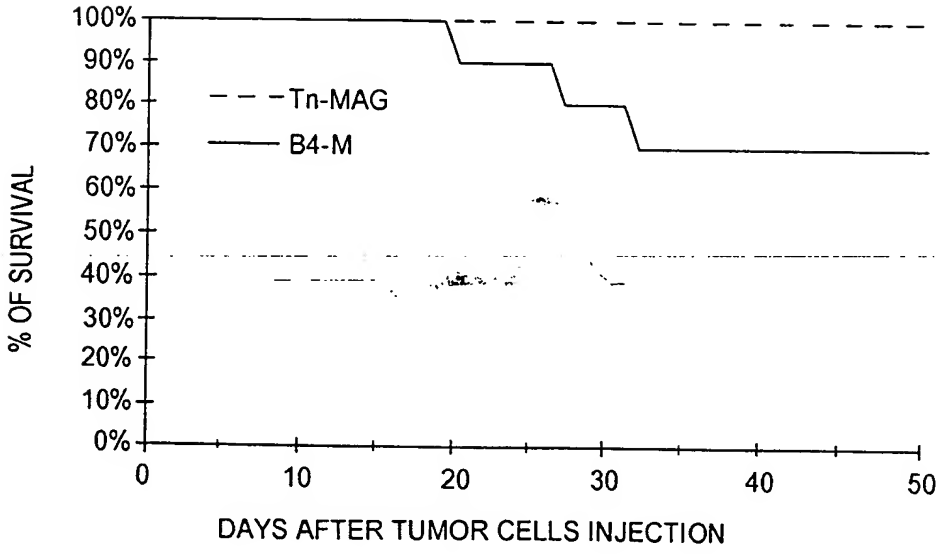
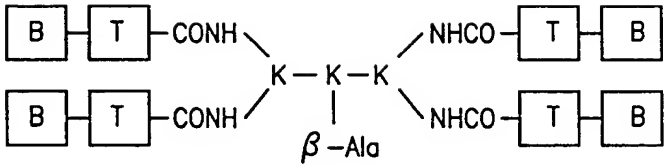

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Tn-MAG
B4-M
% OF SURVIVAL
0
10
20
30
40
50
DAYS AFTER TUMOR CELLS INJECTION

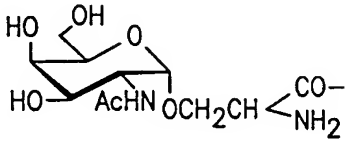
FIG. 7




MAG:Tn–PV

B = Tn antigen

*saccharidic*




T = PV epitope

*peptidic*

KLFAVWKITYKDT (SEQ. ID NO. 4)

FIG. 8

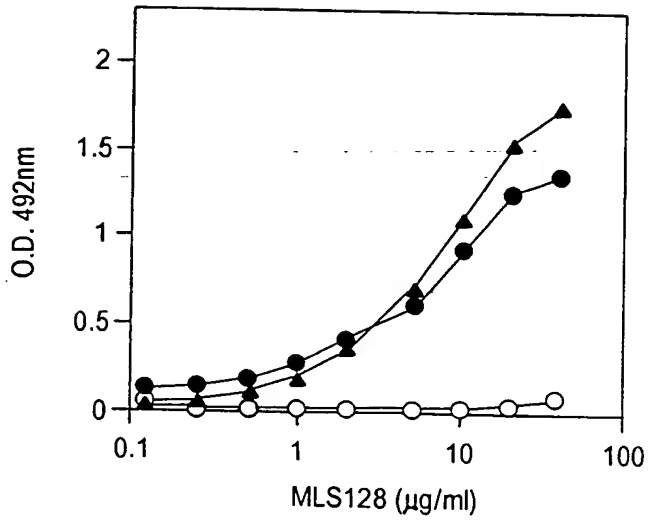

O.D. 492nm
2
1.5
1
0.5
0
0.1
1
10
100
MLS128 (µg/ml)

FIG. 9a

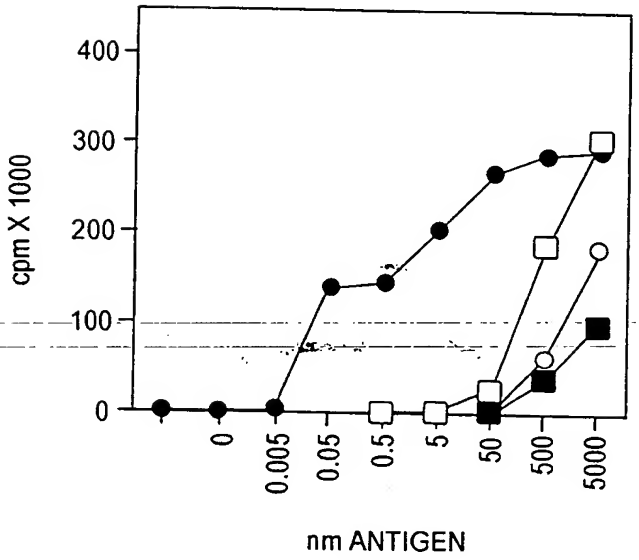

cpm X 1000
400
300
200
100
0
0
0.005
0.05
0.5
5
50
500
5000
nm ANTIGEN

FIG. 9b

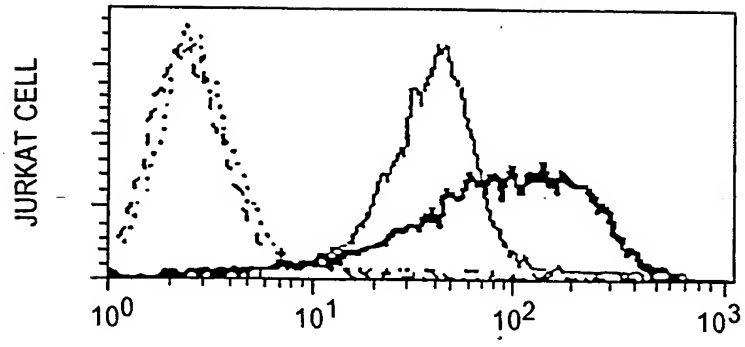



FIG. 10a

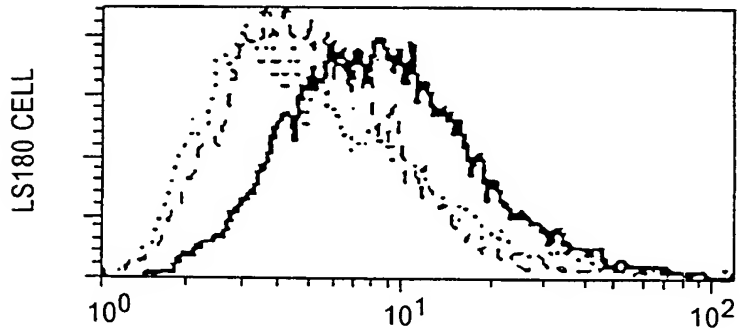



FIG. 10b

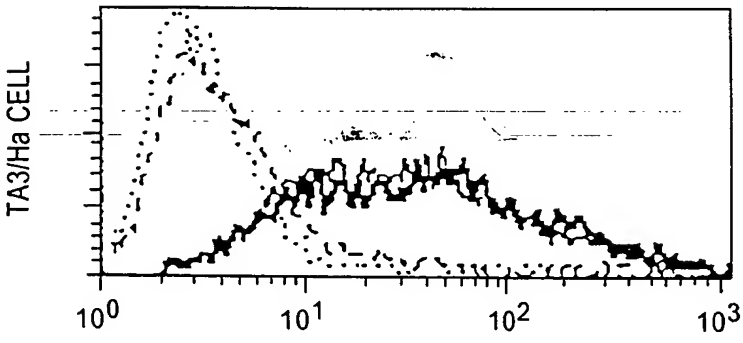



FIG. 10c

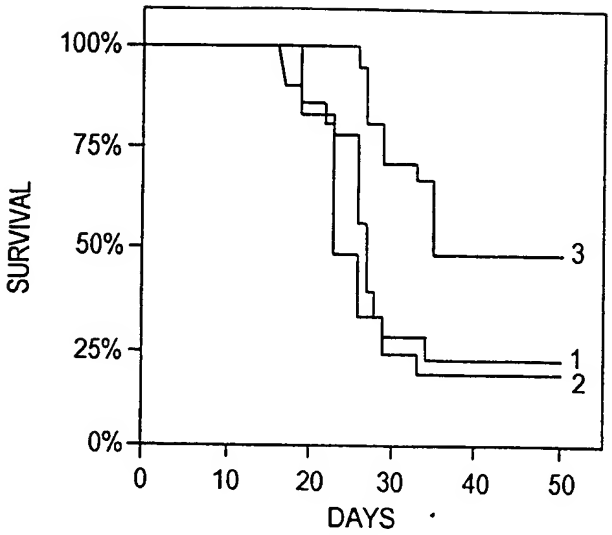



FIG. 11

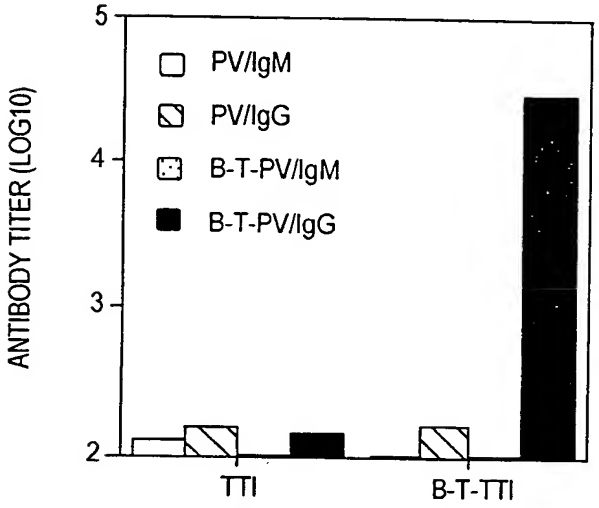



FIG. 12a

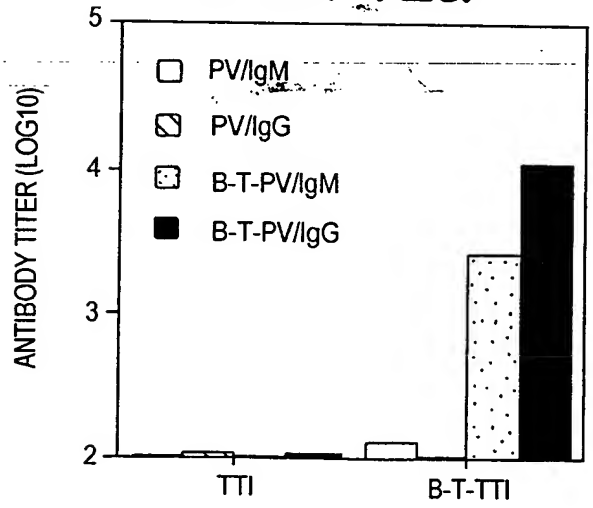



FIG. 12b

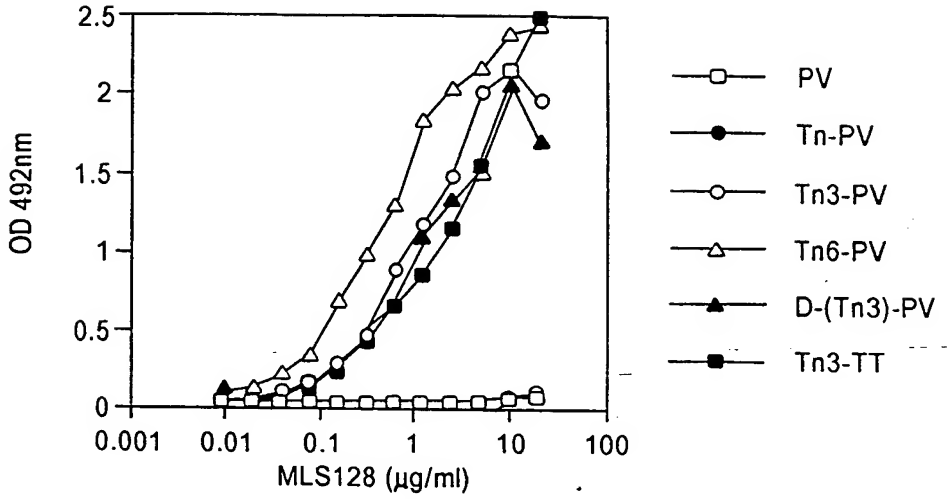



FIG. 13a

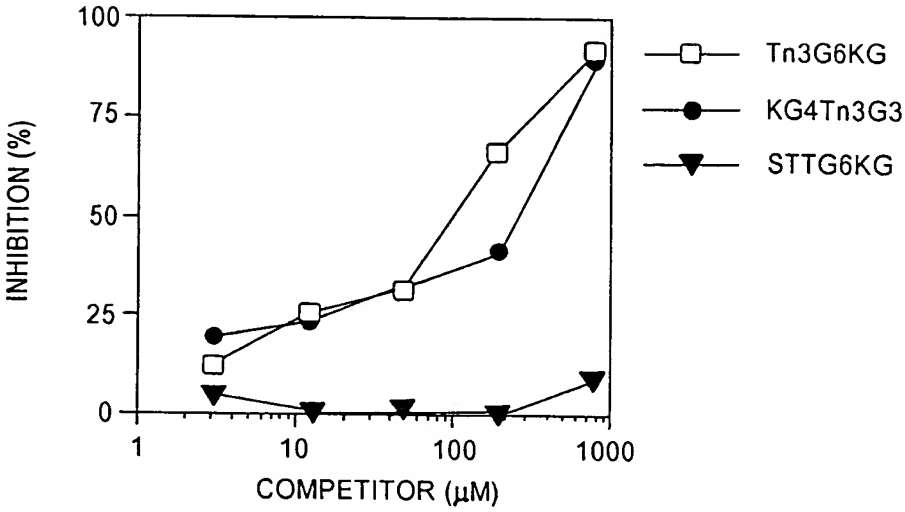



FIG. 13b

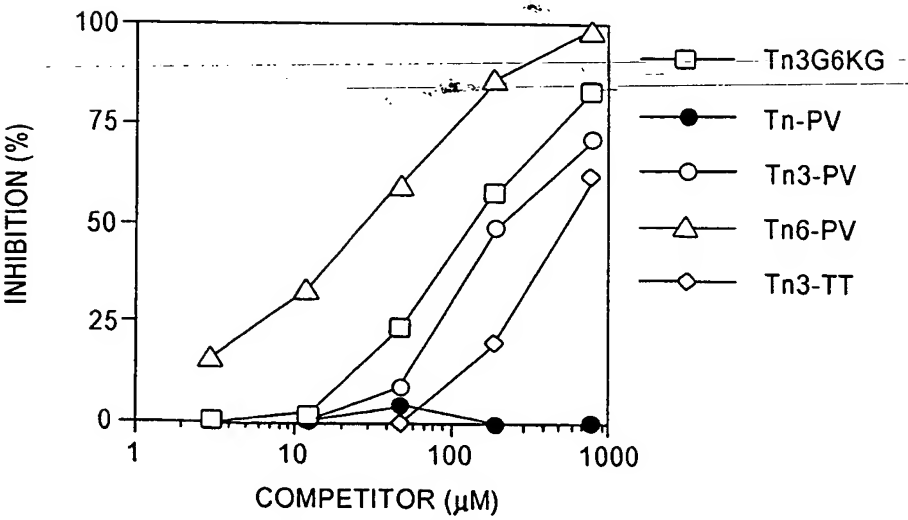



FIG. 13c

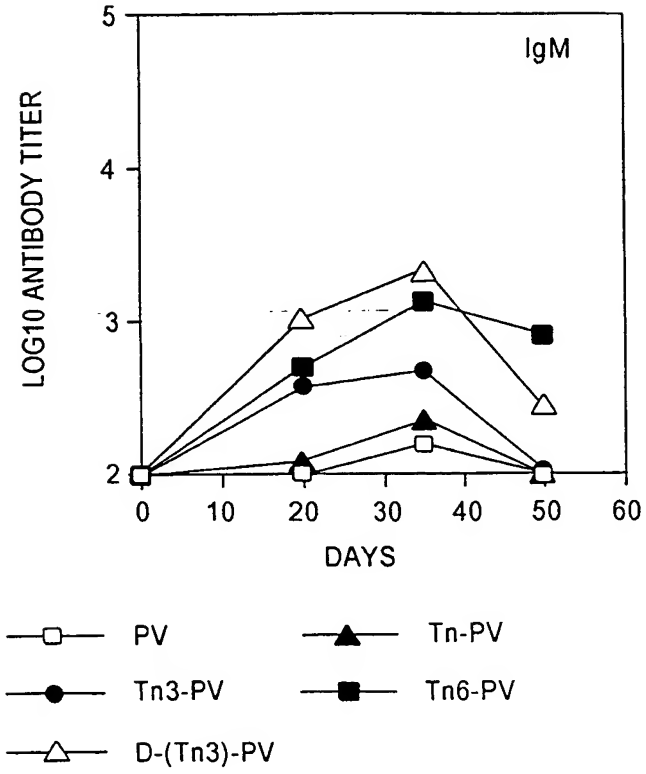



FIG. 14a

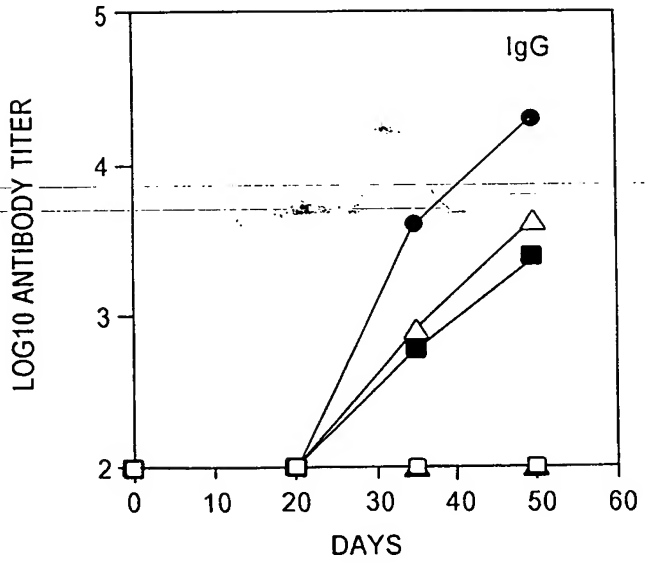



FIG. 14b

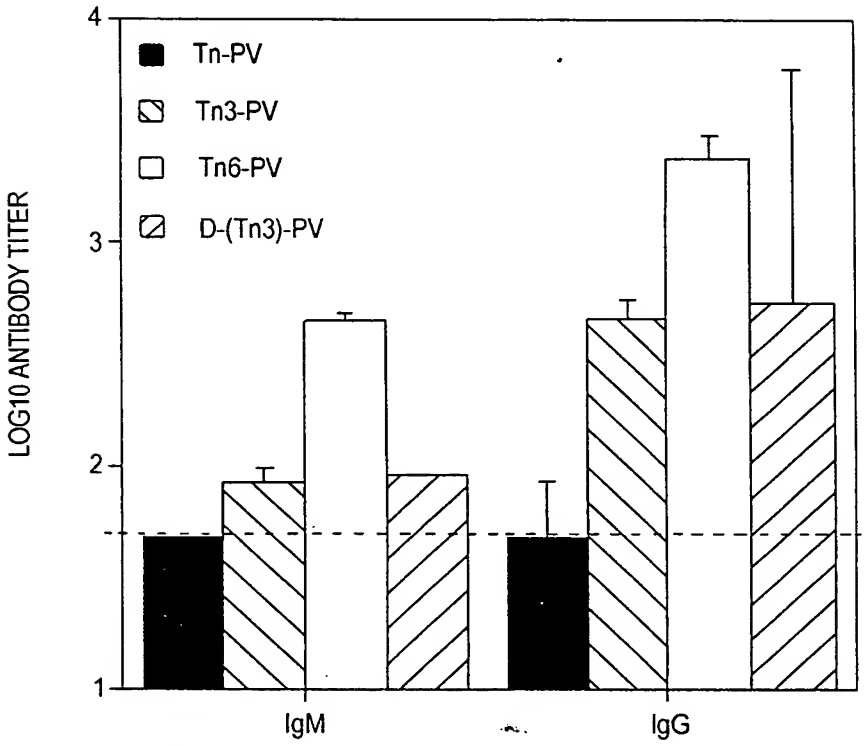
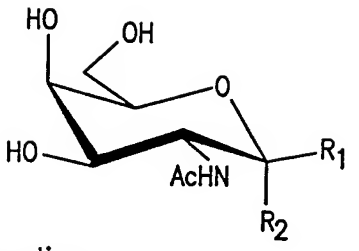
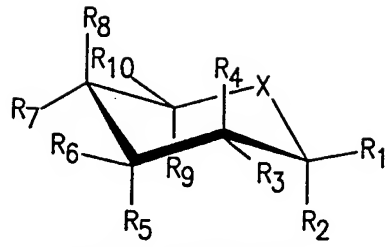



FIG. 15




Tn antigen
$R_1$=H,$R_2$=O–Ser or O–Thr or OH
$R_1$=O–Ser or O–Thr or OH,$R_2$=H




Tn antigen derivatives
X=O,S,$CH_2$,NH
$R_1$,$R_2$=H,OR,SR,$CH_2$R
$R_{3-10}$=H,OH,NHAc,$CH_2$OH,$CH_3$
R=carbohydrate residue,linker,amino–acid

FIG. 16

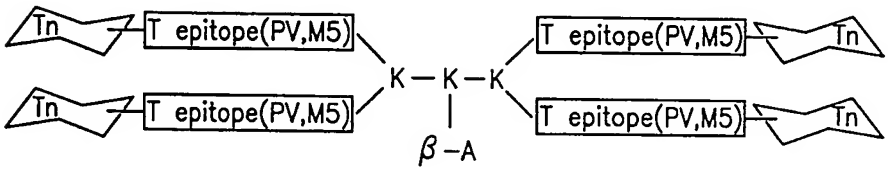



FIG. 17a

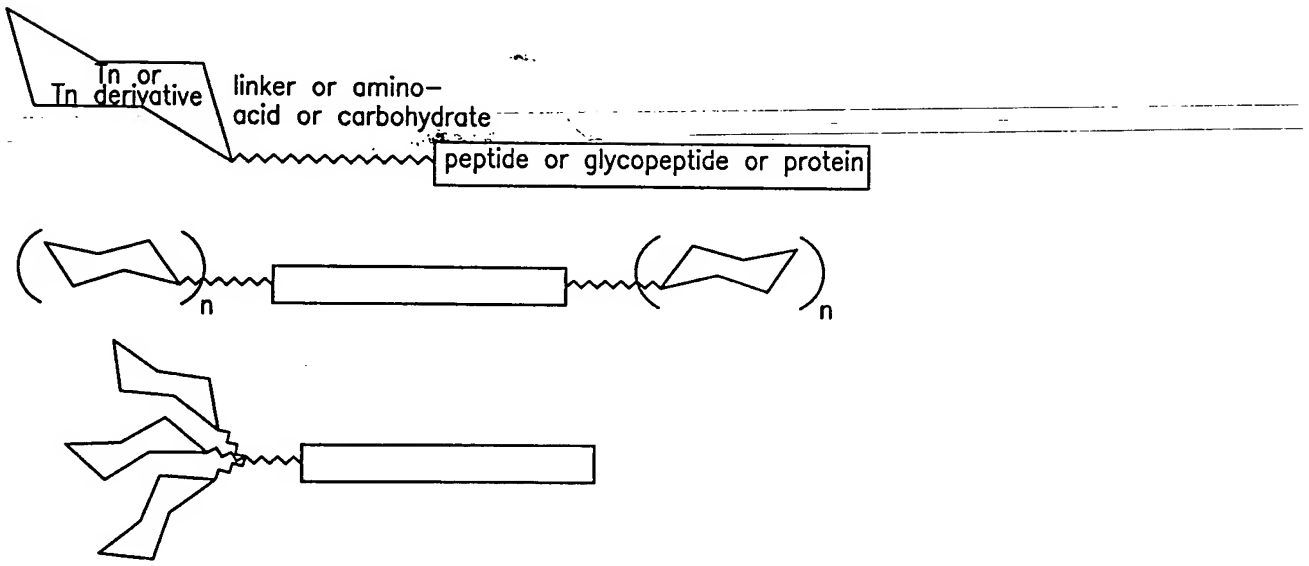



FIG. 17b

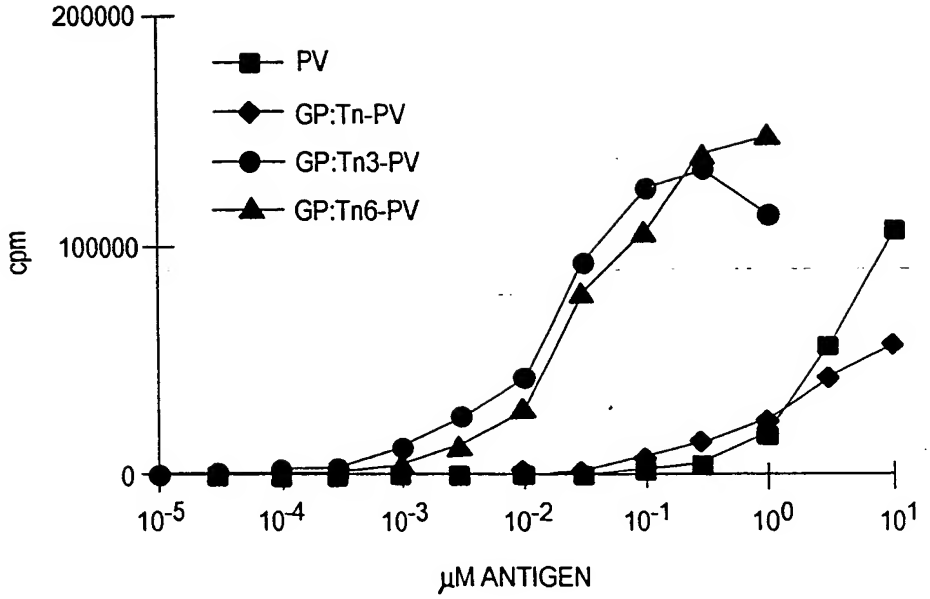



FIG. 18a

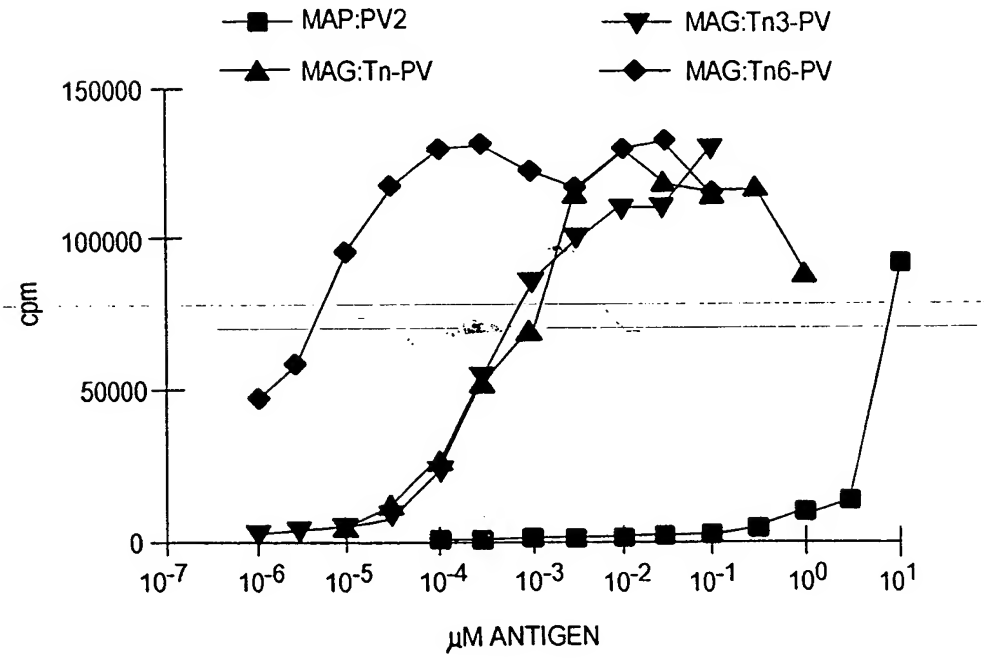



FIG. 18b

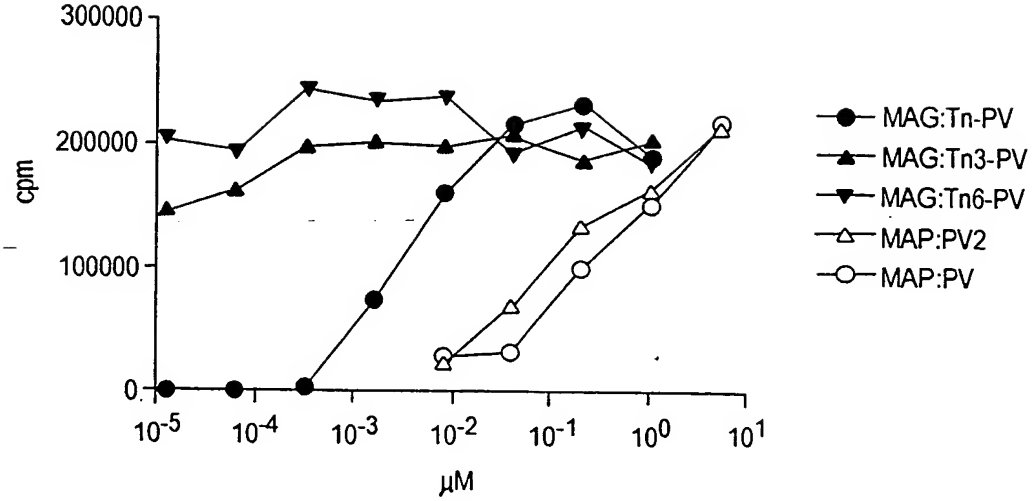



FIG. 19a

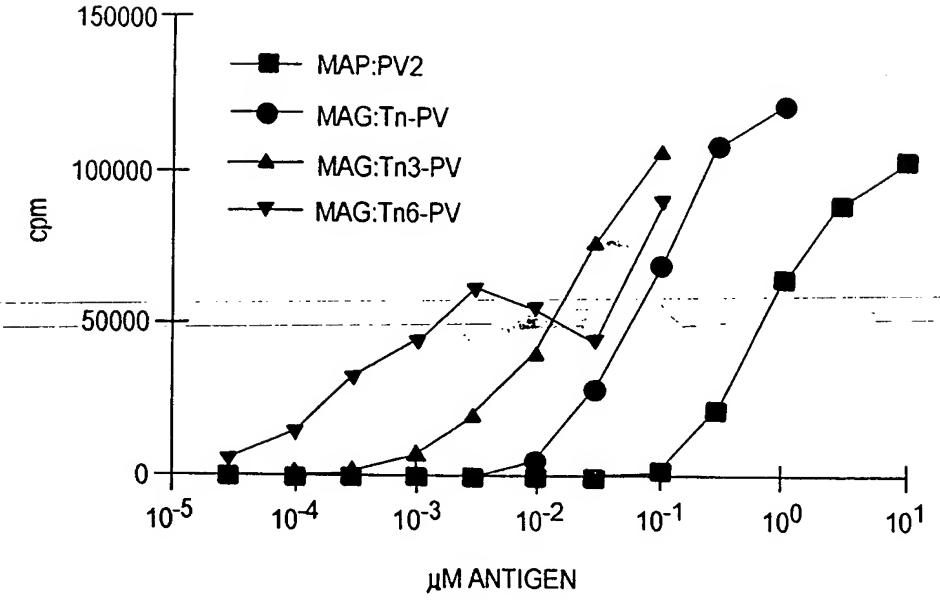



FIG. 19b

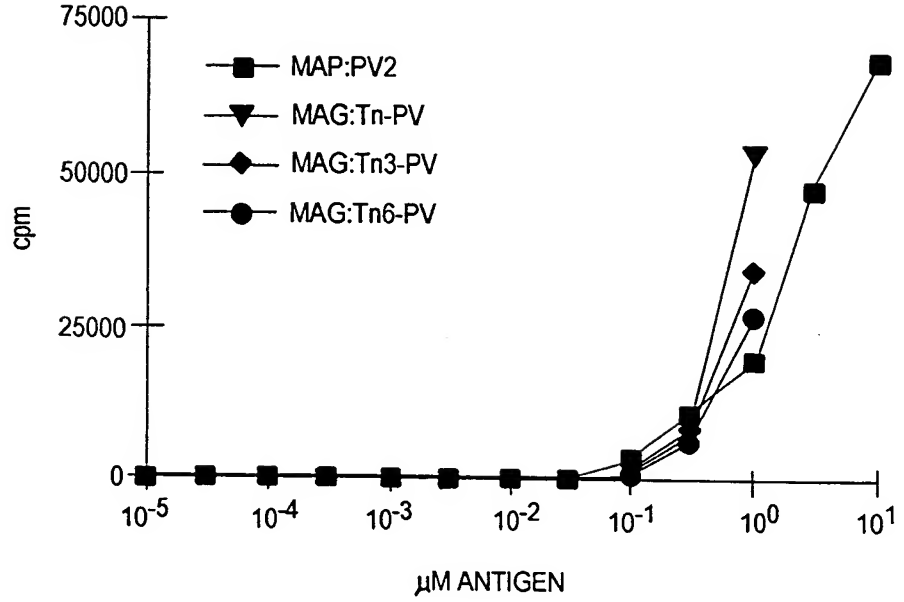

75000
50000
25000
0
cpm
MAP:PV2
MAG:Tn-PV
MAG:Tn3-PV
MAG:Tn6-PV
$10^{-5}$
$10^{-4}$
$10^{-3}$
$10^{-2}$
$10^{-1}$
$10^{0}$
$10^{1}$
μM ANTIGEN

FIG. 20

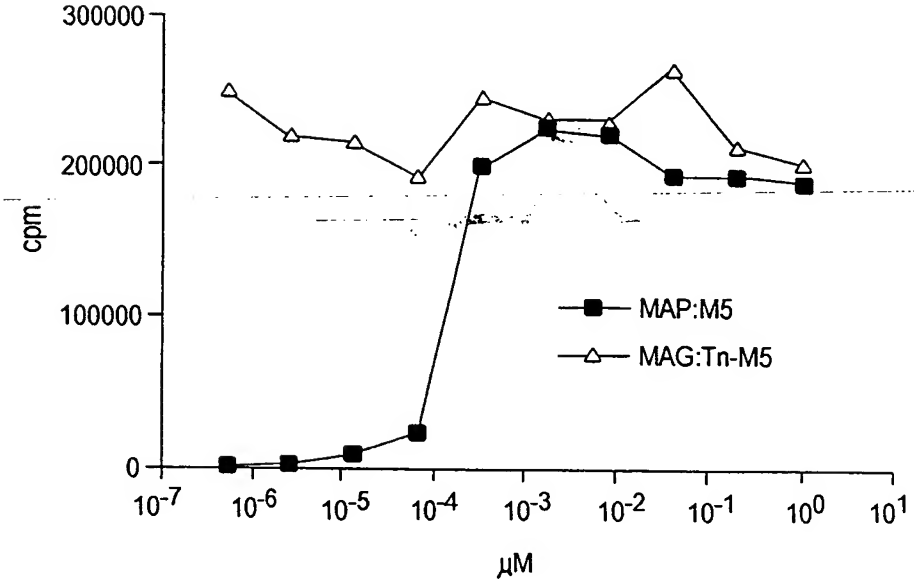

300000
200000
100000
0
cpm
MAP:M5
MAG:Tn-M5
$10^{-7}$
$10^{-6}$
$10^{-5}$
$10^{-4}$
$10^{-3}$
$10^{-2}$
$10^{-1}$
$10^{0}$
$10^{1}$
μM

FIG. 21

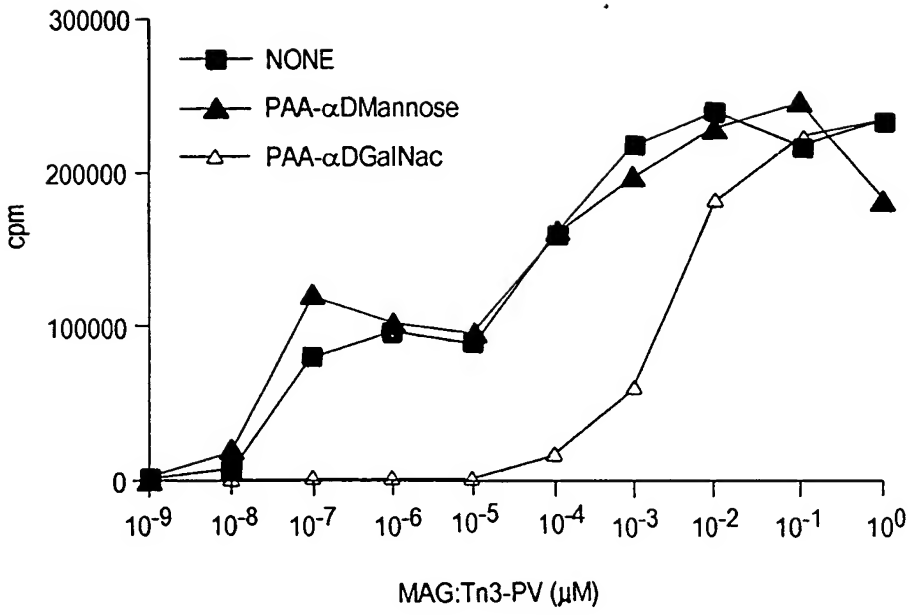

300000
200000
100000
0
cpm
NONE
PAA-αDMannose
PAA-αDGalNac
10-9
10-8
10-7
10-6
10-5
10-4
10-3
10-2
10-1
100
MAG:Tn3-PV (μM)

FIG. 22